Section 2

$$\frac{6 \times 120}{6 + 120} = 40 \, \mu f$$

$$R_{eq} = R_1 + R_2 + R_3$$
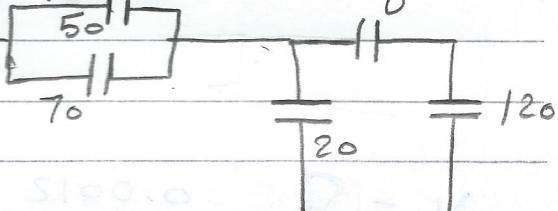
$$20 + 40 = 60 \, \mu f$$
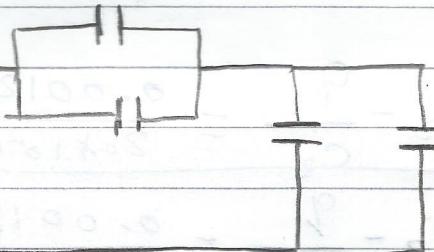
$$Ceq = \frac{120 \times 60}{120 + 60} = 40 \, \mu f$$
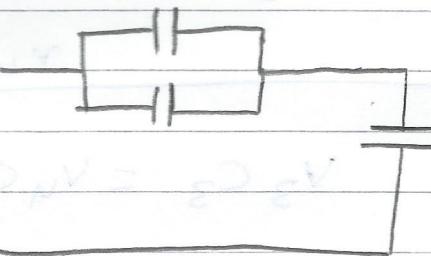
$C_{eq} = 20 \mu f$
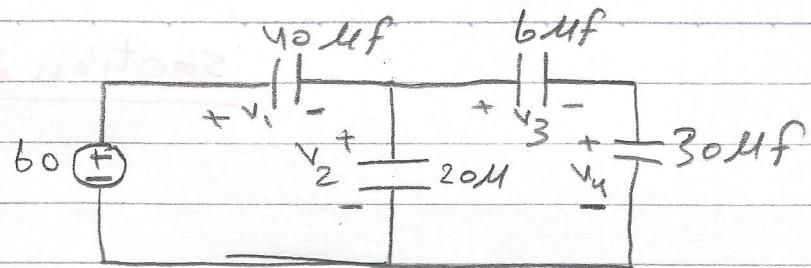
total charge $(q) = C_{eq} V$

$$= 20 \times 10^{-6} * 60 = 1.2 mC$$
$$= 0.0012 C$$

$V_1 = \dfrac{q}{C_1} = \dfrac{0.0012}{40 \times 10^{-6}} = 30 \text{ V}$

$V_2 = \dfrac{q}{C_2} = \dfrac{0.0012}{20 \times 10^{-6}} = 15 V$

$V_3 = \dfrac{q}{C_3} = \dfrac{0.0012}{60 \times 10^{-6}} = 30 V$

$v_4 = 20$

$V_3 C_3 = V_4 C_4$

$V_3 * 60 = V_4 * 30$

$\dfrac{V_3}{V_4} = \dfrac{30}{60} = \dfrac{1}{2}$

$V_4 = 2 V_3$

$V_3 + V_4 = V_2$
$V_3 + V_4 = 30 \rightarrow ①$
$V_3 + 2V_3 = 30 \qquad \boxed{V_3 = 10} \rightarrow ②$

Sub ② in ①

$V_3 + V_4 = 30 \Rightarrow 10 + V_4 = 30 \Rightarrow \boxed{V_4 = 20V}$